

# GSBT2026

PHASE CONTROLLED SCR

*Stud-box assembly*

<b>VOLTAGE UP TO</b>	<b>1600 V</b>
<b>AVERAGE CURRENT</b>	<b>264 A</b>
<b>SURGE CURRENT</b>	<b>8.5 kA</b>



## BLOCKING CHARACTERISTICS

Characteristic		Conditions	Value
V <sub>RRM</sub>	Repetitive peak reverse voltage		1600 V
V <sub>RSM</sub>	Non-repetitive peak reverse voltage		1700 V
V <sub>DRM</sub>	Repetitive peak off-state voltage		1600 V
I <sub>DRM</sub>	Repetitive peak off-state current, max.	V <sub>DRM</sub> , single phase, half wave, T <sub>j</sub> = T <sub>jmax</sub>	50 mA
I <sub>RRM</sub>	Repetitive peak reverse current, max.	V <sub>RRM</sub> , single phase, half wave, T <sub>j</sub> = T <sub>jmax</sub>	50 mA

## ON-STATE CHARACTERISTICS

I <sub>T(AV)</sub>	Average on-state current	Sine wave, 180° conduction, Th = 55 °C	264 A
I <sub>T(RMS)</sub>	R.M.S. on-state current	Sine wave, 180° conduction, Th = 55 °C	415 A
I <sub>TSM</sub>	Surge on-state current	Non rep. half sine wave, 50 Hz, V <sub>R</sub> = 0 V, T <sub>j</sub> = T <sub>jmax</sub>	8.5 kA
I <sup>2</sup> t	I <sup>2</sup> t for fusing coordination		361 kA <sup>2</sup> s
V <sub>T(TO)</sub>	Threshold voltage	T <sub>j</sub> = T <sub>jmax</sub>	0.90 V
r <sub>T</sub>	On-state slope resistance	T <sub>j</sub> = T <sub>jmax</sub>	0.650 mΩ
V <sub>TM</sub>	Peak on-state voltage, max	On-state current I <sub>T</sub> = 1000 A, T <sub>j</sub> = 25 °C	1.62 V
I <sub>H</sub>	Holding current, max	T <sub>j</sub> = 25 °C	600 mA
I <sub>L</sub>	Latching current, typ	T <sub>j</sub> = 25 °C	1000 mA

## TRIGGERING CHARACTERISTICS

V <sub>GT</sub>	Gate trigger voltage	T <sub>j</sub> = 25 °C, V <sub>D</sub> = 5 V	3.0 V
I <sub>GT</sub>	Gate trigger current	T <sub>j</sub> = 25 °C, V <sub>D</sub> = 5 V	200 mA
V <sub>GD</sub>	Non-trigger voltage	V <sub>D</sub> = 67% V <sub>RRM</sub> , T <sub>j</sub> = T <sub>jmax</sub>	0.25 V
P <sub>GM</sub>	Peak gate power dissipation	Pulse width 5 ms	10 W
P <sub>G(AV)</sub>	Average gate power dissipation		2 W
I <sub>FGM</sub>	Peak gate current		3 A
V <sub>FGM</sub>	Peak gate voltage (forward)		20 V
V <sub>RGM</sub>	Peak gate voltage (reverse)		5 V

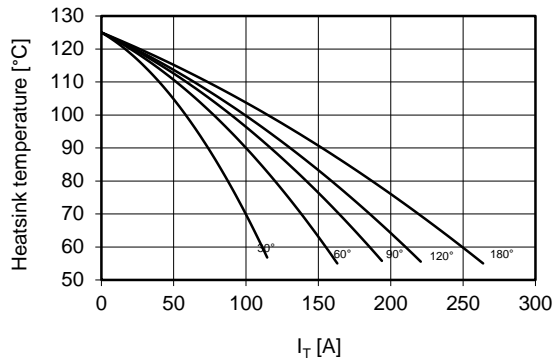
## SWITCHING CHARACTERISTICS

di/dt	Critical rate of rise of on-state current	T <sub>j</sub> = T <sub>jmax</sub>	200 A/μs
dV/dt	Critical rate of rise of off-state voltage	T <sub>j</sub> = T <sub>jmax</sub>	500 V/μs
t <sub>q</sub>	Turn-off time, typ	T <sub>j</sub> = T <sub>jmax</sub> , I <sub>T</sub> = 320 A, di/dt = -12.5 A/μs	μs
		V <sub>R</sub> = 100 V, V <sub>D</sub> = 67% V <sub>DRM</sub> , dV/dt = 20 V/μs	

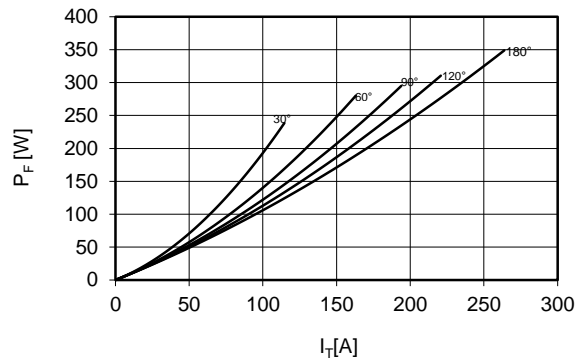
## THERMAL AND MECHANICAL CHARACTERISTICS

R <sub>th(j-c)</sub>	Thermal resistance (junction to case)		0.19 °C/W
R <sub>th(c-h)</sub>	Thermal resistance (case to heatsink)		0.01 °C/W
T <sub>jmax</sub>	Max operating junction temperature		125 °C
T <sub>stg</sub>	Storage temperature		-40 / 125 °C
M	Mounting torque ± 10%	Non lubricated threads	31.0 N·m
	Mass		600 g

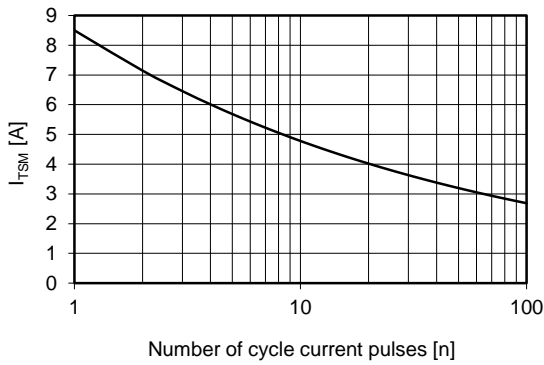
Current rating - sine wave



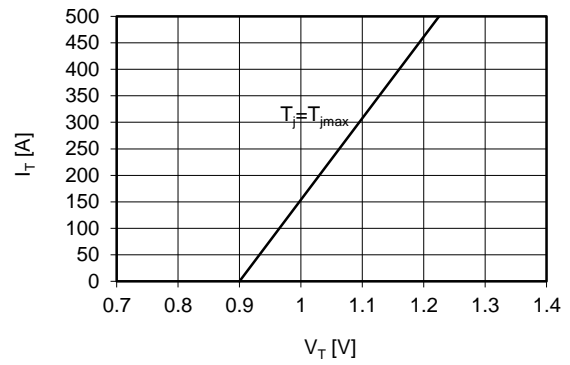
Power loss - sine wave



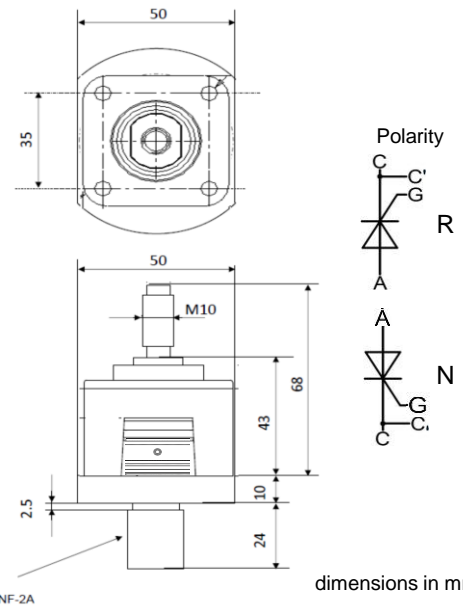
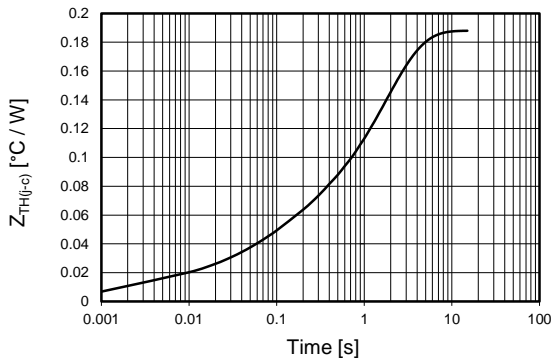
Maximum surge current d.s. cooled



On-state voltage drop



Thermal impedance (j-c)



**Ordering information GSBT2026-VVGLP-TEEH-XX**

- VV**: blocking voltage / 100 (e.g. 16 for 1600 V)
- G**: trigger lead type (**S** = straight **T** = twisted **blank** = no leads)
- L**: trigger lead length x 100 mm (**3 - 4 - 5 - 7 blank** = no leads)
- P**: polarity: **N** = cathode to base (black) - **R** = anode to base (red)
- T**: cross sectional area of the braid **3** = 35 mm<sup>2</sup> - **4** = 42 mm<sup>2</sup> - **5** = 50 mm<sup>2</sup>
- EE**: length of the pgtail (center hole-center hole) in mm / 10
- H**: lug eyelet hole for screw **6** = M6 - **8** = M8 - **1** = M10
- XX**: Custom variation (blank = standard)

In the interest of product improvement Green Power Solutions reserves the right to change any specification given in this data sheet